***Green Car and Insurance***



We intend to focus attention on the relevance of eco-driving habits of insured parties regards to motor insurance policies.

Some car insurers [[1]](#footnote-1) help offset some of the damages to the environment caused by car's CO2 emissions. They do this by contributing to projects like reforestation, renewable energy sources and ecological education in everyday life.

In other cases insurance policies provide an extra discount on premium for electric or hybrid car owners.

Some insurers are also providing eco-friendly repair network. Their appointed mechanics recycle materials like used oil and old bumpers. Moreover they have an Ethical Engagement Policy to guide the social, ethical and environmental aspects of their investments which includes human rights, sustainability and labour rights.

Some companies provide a formula “pay as you drive”. *Pay-As-You-Drive (PAYD) Vehicle Insurance* (so called *Distance-Based*, *Usage-based*, *Mileage-Based*, *Per-Mile Premiums* and *Insurance Variabilization*) means that a vehicle’s insurance premiums are based directly on how much it is driven during the policy term. Premiums are calculated taking in to account the following factors: vehicle-mile, vehicle-kilometer or vehicle-minute. Existing rating factors are incorporated, so higher-risk motorists pay more per unit than lower-risk drivers[[2]](#footnote-2).

In this manner it is possible to implement eco-driving habits like car pooling. Carpooling is the solution for people who can’t use public transport to get to work, but still want to contribute to a better environment. For instance “coworkers” can decide to share the some auto to go to work together.

Some insurance companies offer “eco-driving policies”[[3]](#footnote-3).

While the car insurance works, in order to determine annual premium, they consider:

* The year, model, transmission and fuel type of the car
* The number of kilometers (or miles) the car is driven in 12 months
* The emission factor for car’s fuel.

**Eco- driving habits and Safety**

It’s well know that eco-driving is not only fuel efficient, but also safer [[4]](#footnote-4)

In the US and around the world, there is a growing interest in incorporating eco-driving techniques in early drivers education courses.

“Several studies done in the last 10 years indicate a direct connection between efficient drivers and those drivers with fewer preventable accidents.

One internal study at a major US-based trucking company indicated that their top fuel-efficient drivers were squarely in the top percentile of drivers with the fewest preventable accidents. It was also found that their drivers who routinely drove in an inefficient manner were among those drivers with the greatest number of preventable accidents.

*By practicing eco-driving techniques motorists maintain a high level of awareness to traffic patterns and the flow of vehicles around and ahead of the driver, allowing the driver to plan to minimize the loss of momentum while operating their vehicle safely and efficiently.*

*Eco-driving motorists are encouraged to “de-couple” emotionally from the circumstances of normal traffic, focusing instead on a competition between “themselves and the gas pump” verses jockeying for position with other drivers around them.*

*By limiting the top-speed and maintaining generous following-distances eco-drivers give themselves extra time to react to unexpected changes, providing additional decision making time and a greater likelihood of maintaining control in evasive maneuvers.”[[5]](#footnote-5)*

**Some Eco-driving basic techniques:**

1- Mantainance.

Key parameters to maintain are: proper tire pressure, wheel alignment, engine oil with low kinematic viscosity.

2- Driving lighter and/or lower-drag vehicles and minimizing the amount of people, cargo, tools, and equipment carried in the vehicle (removing common unnecessary accessories such as roof racks, brush guards, wind deflectors, ecc., driving with the fuel tank mostly empty and tanking more frequently).

3- Maintaining an efficient speed. Optimal efficiency can be expected while cruising with no stops, at minimal throttle and with the transmission in the highest gear.

4- Optimal choice of gear (in case of manual transmission).

5- Experts recommend accelerating quickly and smoothly.

6- A driver may further improve economy by anticipating the movement of other traffic users. For example, a driver who stops quickly, or turns without signaling, reduces the options another driver has for maximizing his performance.

7- Using air conditioning as required by the occupants and not continuously.

**Eco driving and insurance**

It’s a matter of fact that driving habits represent a model to discriminate motor insurance risk. Regards to ecological drivers, as we have said, actuarial studies demonstrate that an eco-driver should be safer [[6]](#footnote-6).

Thus Eco-driving could be an important model to discriminate risks in motor insurance instead of using other actuarial models such as gender models. About that we have to consider that the European Court of Justice (ECJ 1 March 2011) ruled against using gender-based criteria to set prices. So it’s important to find new discrimination models.

Some insurance companies are providing systems to valuate eco-driving habits of their customers.It’s possible to control eco-driving habits trough a black box installed in the car and trough car inspection. In case of eco driving should be provided an ex ante premium reduction or an ex post bonus (discount for the next insurance premium).

**In such a perspective we would like to stimulate an observation and a debate on the following questions:**

1. In your country do insurers contribute to eco-projects like reforestation, renewable energy sources and ecological education in everyday life?
2. In your country do insurers provide incentives for green cars?
3. In your country do insurers provide special contractual conditions (such as “pay as you drive” formula) in order to improve eco-driving habits?

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1. See for instance Cooperative Insurance http://www.cooperativeinsurance.co.uk/servlet/Satellite/1201678905970,CFSweb/Page/Insurance-Car [↑](#footnote-ref-1)
2. See http://www.vtpi.org/tdm/tdm79.htm [↑](#footnote-ref-2)
3. We can consider some Australian companies like ibuyeco http://www.ibuyeco.com.au/car-insurance.jsp. [↑](#footnote-ref-3)
4. See Diken, Chris; Erica Francis. ["Ten fuel-saving tips from a hypermiler"](http://www.msnbc.msn.com/id/20706595/). MSNBC. <http://www.msnbc.msn.com/id/20706595/>. [↑](#footnote-ref-4)
5. <http://blog.fuelclinic.com/2010/03/08/should-eco-driving-be-part-of-drivers-education/>;

See Unece (United nation economic Commission for Europe) http://www.unece.org/fileadmin/DAM/trans/roadsafe/securite\_routiere/Eco-conduite\_cle782bc7.pdf

See also [Jeongwoo Lee. *Vehicle Inertia Impact on Fuel Consumption ofConventional and Hybrid Electric Vehicles Using Acceleration and Coast Driving Strategy*. Ph.D thesis. Virginia Polytechnic Institute, September 4, 2009](http://scholar.lib.vt.edu/theses/available/etd-09172009-234744/unrestricted/ETD_PhD_Dissertation_Jeongwoo_Lee.pdf); http://scholar.lib.vt.edu/theses/available/etd-09172009-234744/unrestricted/ETD\_PhD\_Dissertation\_Jeongwoo\_Lee.pdf [↑](#footnote-ref-5)
6. See particularly UNECE studies (United nation economic Commission for Europe) http://www.unece.org/fileadmin/DAM/trans/roadsafe/securite\_routiere/Eco-conduite\_cle782bc7.pdf [↑](#footnote-ref-6)